

## 9700 serie | EMI/RFI shielded mesh foil windows

For the highest possible EMI / RFI shielding performance, a woven electrically conductive microstructure of mesh is bonded between two layers of glass or plastic (**stepped window**). Alternatively, a single layer of Mesh foil 9000 series is fixed onto one side of a single glass or plastic window with self-adhesive (**single window**).

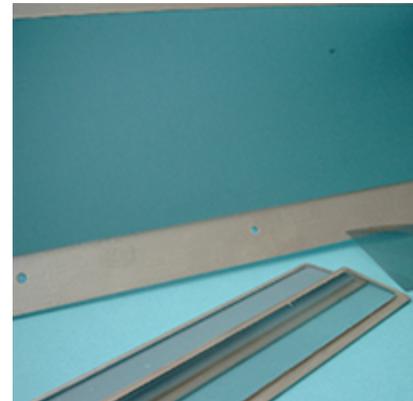
This can be done by laminating or edge bonding. The EMI-shielded mesh-foil windows can be provided with a silver bush bar, a electrical conductive gasket or can be supplied with a frame for easy mounting. Windows can optionally be provided with a water seal.

### Light transmission

Opacity of mesh windows is 64,5%. A lack of available light should not be a concern, since an average pair of sunglasses allows less than 9% light to come through.

### Applications

- LCD displays;
- membrane switches,
- Touch screens
- Defence / Avionics etc.
- Devices for medical technology
- For test and measuring instruments

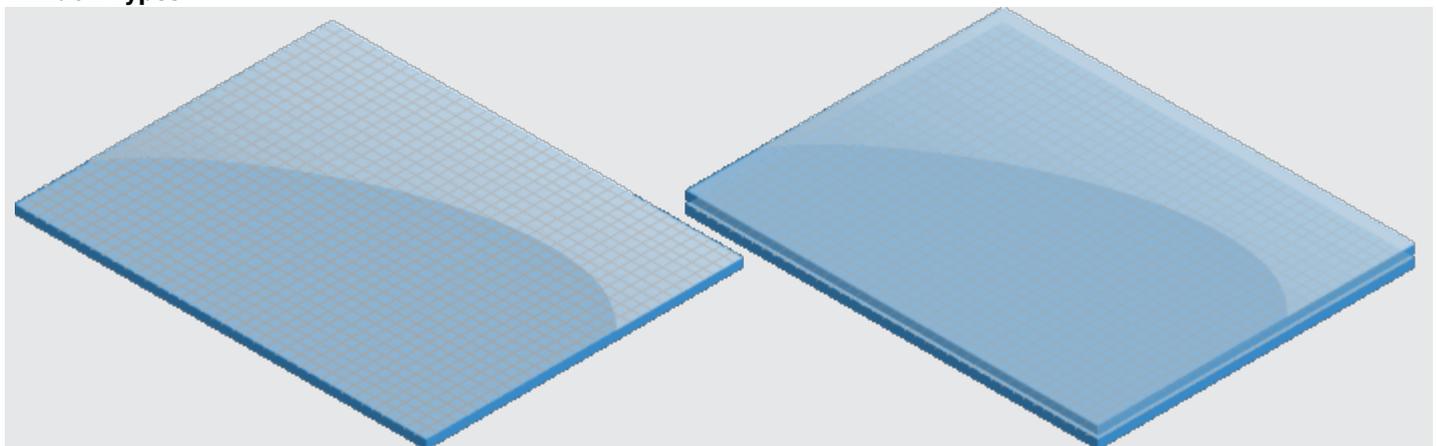


*EMI/RFI shielded window*



*Example of stepped window with silver bus bar and protection foils*

### Window types



**Single window:** Wire mesh fixed onto one side of a glass or plastic window

**Stepped window:** Wire mesh bonded between two glass or plastic windows

### Window materials

EMI/RFI shielded mesh foil windows can be made from your existing windows or can be supplied as a new window made of:

- polycarbonate (**Material code P**)
- acrylic (**Material code A**)
- glass (**Material code G**)

This applies both to single windows as for the stepped windows.

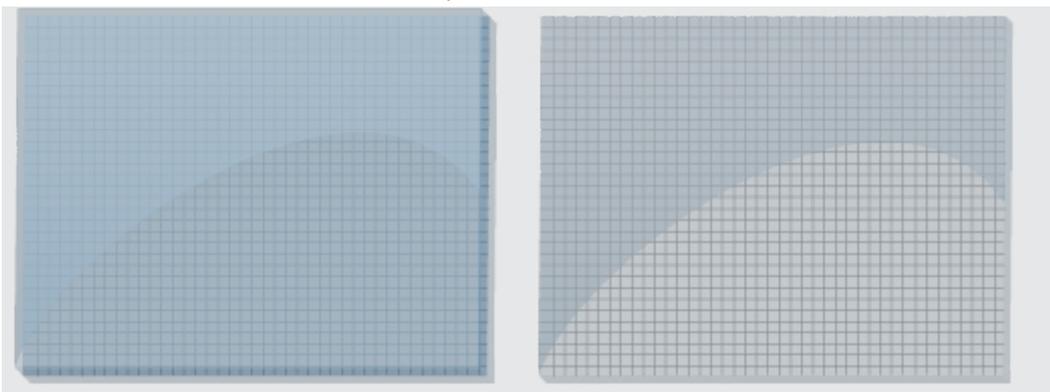
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*EMI/RFI shielded mesh foil window example*



*EMI/RFI shielded mesh foil window example*

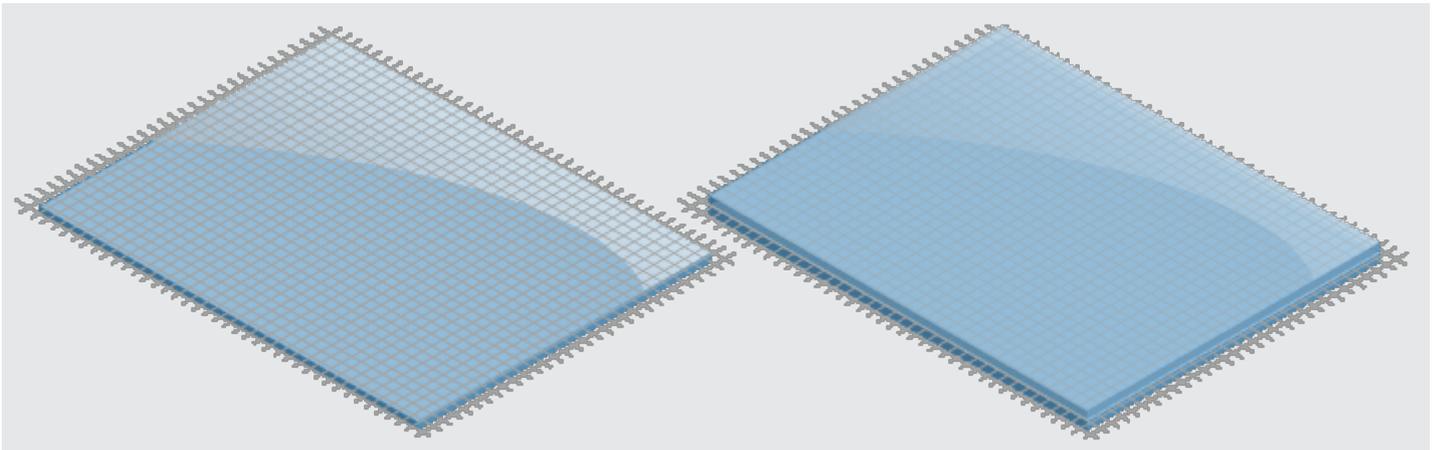


RFI shielded mesh foil windows stepped version    RFI shielded mesh foil windows single version

**Note that it is also possible to laminate the wire mesh under a custom angle to prevent moir effect on for example monitors or LCD displays.**

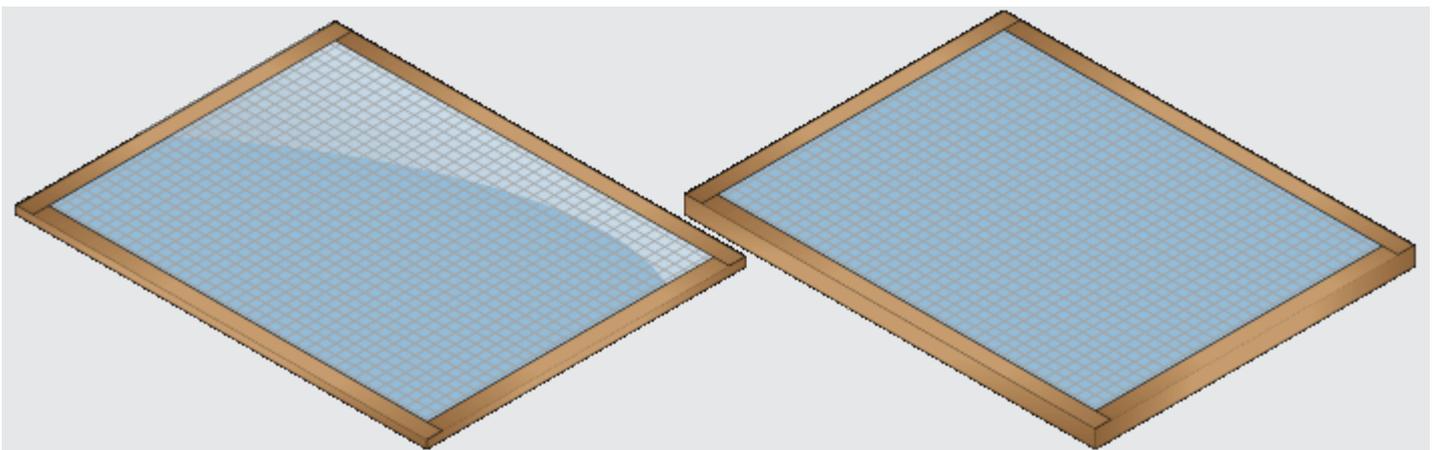
**Contact edges**

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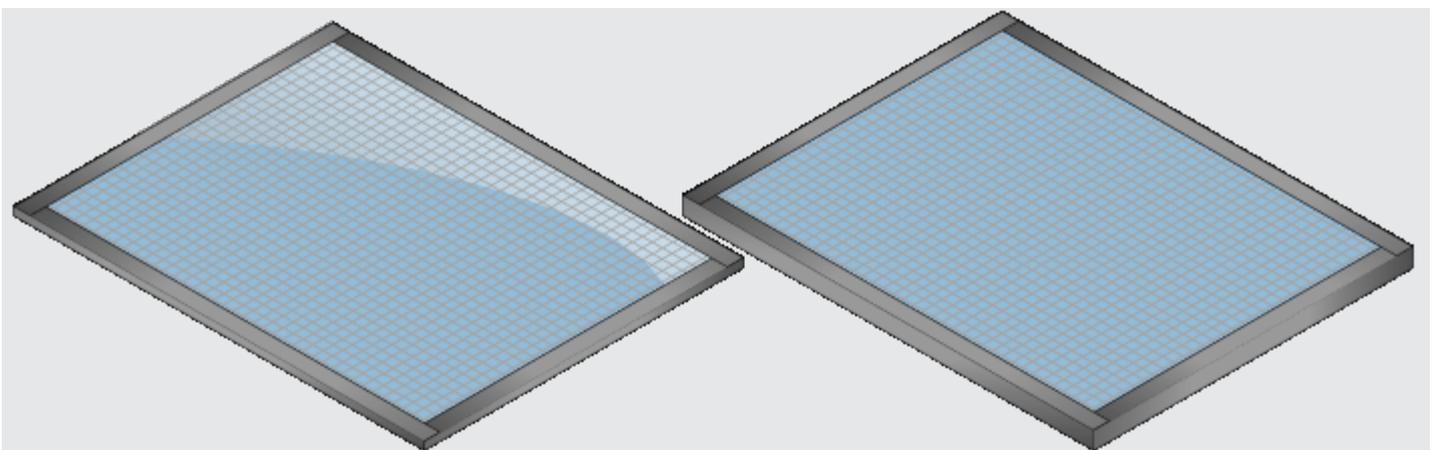
**FM : Flying mesh (Single window)** Wire mesh fixed onto one side of a glass or plastic window. Flying mesh all around to make an electrical contact with the housing / faraday cage.

**FM : Flying mesh (Stepped window)** Wire mesh fixed between two glass or plastic windows. Flying mesh all around to make an electrical contact with the housing / faraday cage.



**CO : Copper bushbar (Single window)** Wire mesh fixed onto one side of a glass or plastic window. Copper bushbar all around to make an electrical contact with the housing / faraday cage.

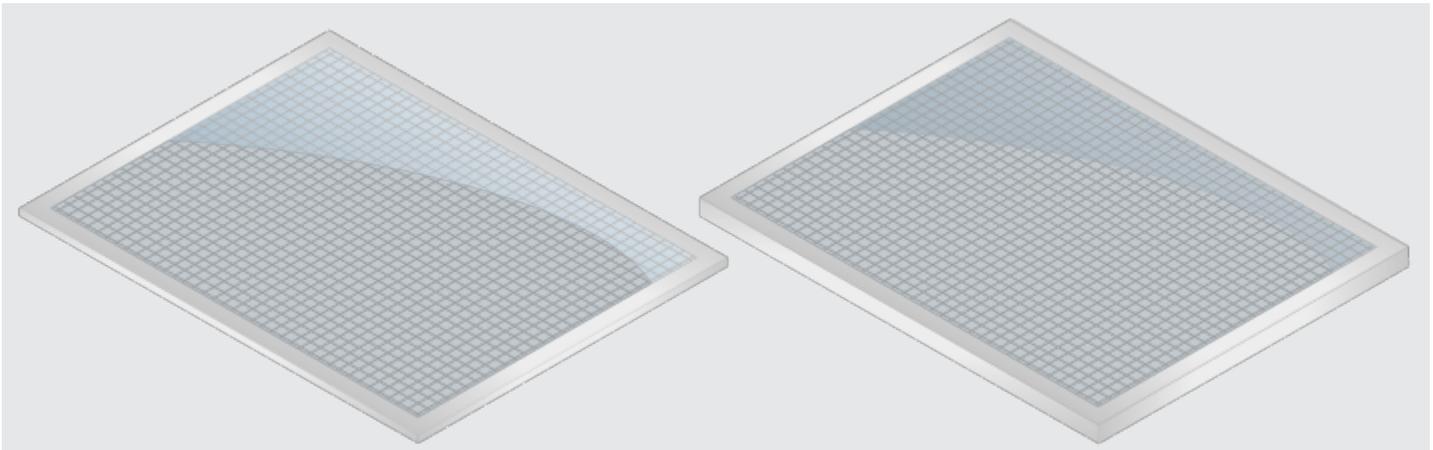
**CO : Copper bushbar (Stepped window)** Wire mesh fixed between two glass or plastic windows. Copper bushbar all around to make an electrical contact with the housing / faraday cage.



**TC : Tinned copper bushbar (Single window)** Wire mesh fixed onto one side of a glass or plastic window. With tinned copper edges for easy soldering and grounding.

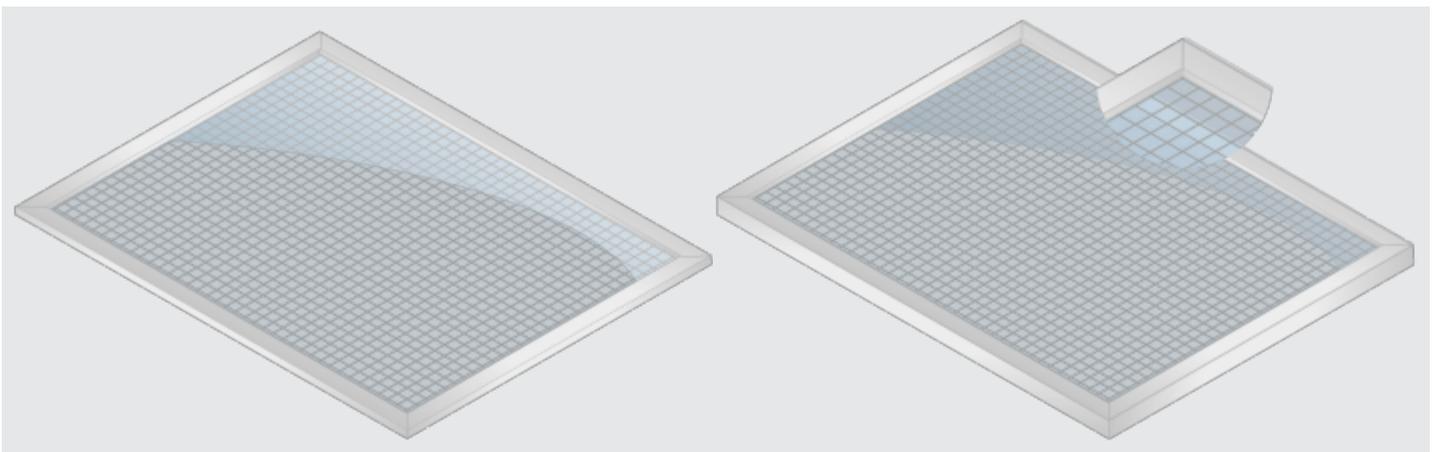
**TC : Tinned copper bushbar (Stepped window)** Wire mesh fixed between two glass or plastic windows. With tinned copper edges for easy soldering and grounding.

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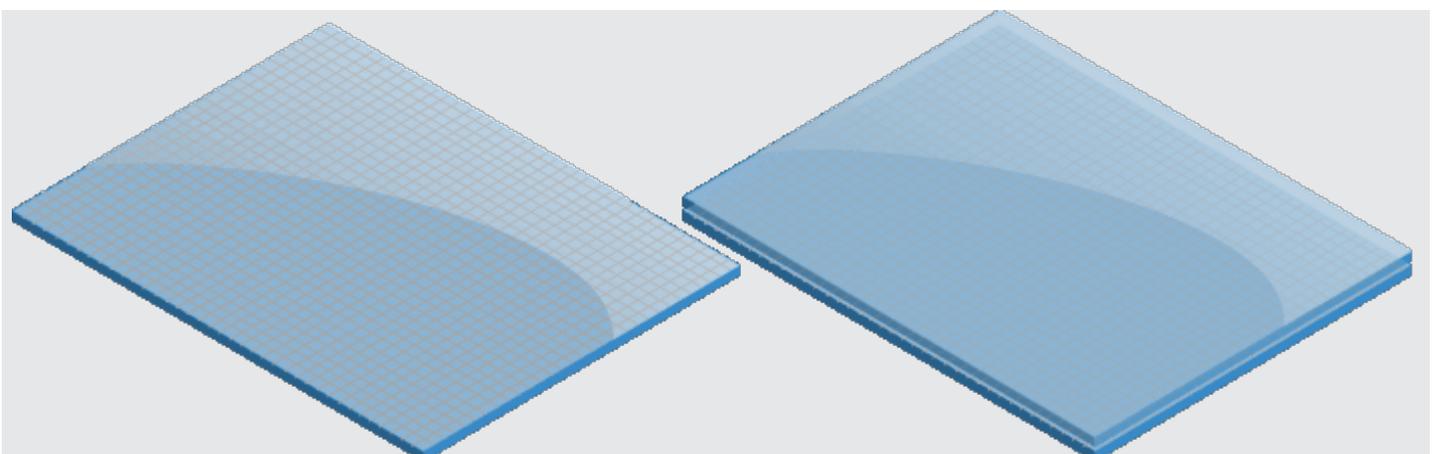
**SB : Silver bushbar (Single window)** Wire mesh fixed onto one side of a glass or plastic window. Silver bushbar all around to make an electrical contact with the housing / faraday cage.

**SB : Silver bushbar (Stepped window)** Wire mesh fixed between two glass or plastic windows. Silver bushbar all around to make an electrical contact with the housing / faraday cage.



**FM : with aluminum frame (Single window)** Wire mesh fixed onto one side of a glass or plastic window. The entire window clamped in an aluminum frame for easy mounting in shielded rooms and faraday cages.

**FM : with aluminum frame (Stepped window)** Wire mesh fixed between two glass or plastic windows. The entire window clamped in an aluminum frame for easy mounting in shielded rooms and faraday cages.



**NO : No contact edge (Single window)** Wire mesh fixed onto one side of a glass or plastic window.

**NO : No contact edge (Stepped window)** Wire mesh fixed between two glass or plastic windows.

### Technical details and shielding performance

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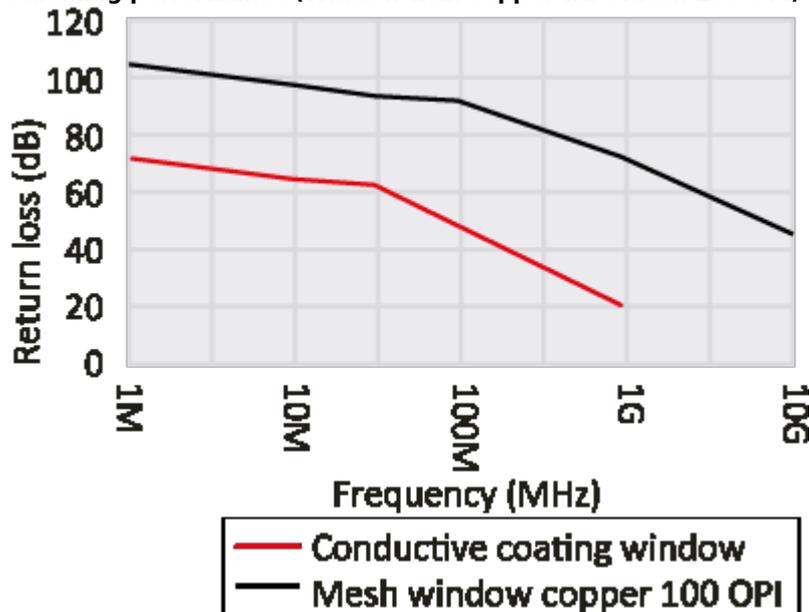
Material	Stainless Steel				Phosphor Bronze		Copper	
wires/inch (OPI)	70	80	100	250	100	250	70	100
Wire Diameter (mm)	0.076	0.050	0.050	0.035	0.097	0.035	0.076	0.050
Nominal Aperture (mm)	0.287	0.267	0.204	0.067	0.157	0.067	0.287	0.204
Light Transmission %	62.6	71	64.5	43.5	38.2	43.5	62.6	64.5

		Attenuation							
Field type	Frequency	dB	dB	dB	dB	dB	dB	dB	dB
H	10 kHz	20	21	22	22	22	20	24	22
H	100 kHz	21	23	23	22	42	24	39	35
H	1000 kHz	30	33	29	37	61	40	58	54
E	1 MHz	90	104	101	114	120	120	105	111
E	10 MHz	89	86	75	91	110	97	100	99
E	100 MHz	69	75	68	78	96	91	86	95
P	1 GHz	66	60	64	75	79	87	66	72
P	10 GHz	33	32	35	-	46	60	34	45

*These values are measured under laboratory conditions.  
In your situation results may differ, please read our Guarantee.*

### Shielding performance (Window with copper wire mesh 100 OPI)



### EMI/RFI shielded mesh foil window shielding performance

**Please note** : top layer can be affected by acid for example from the skin. To protect the conductive layer, you can apply a transparent film or use the adhesive side on top.

Small optical defects are allowed in this product. If you require a product that has absolutely no optical defect then contact us for the "superior selected quality". Please realize that by the extreme caution act in production these products can be several times more expensive.

Series	Width (mm)	Height (mm)	Window material	Window type	Thickness (mm)	Contact edge	Width (mm) contact edge	Mesh angle
9700	Width of the visible area in mm	Height of the visible area in mm	<b>Select an option:</b> P : Polycarbonate (standard) A : Acrylaat G : Glass PS : Polycarbonate (scratch resticancy)	<b>Select an option:</b> 1 : Single window 2 : Stepped window	For single windows, 1, 2, 3 or 4 mm thickness is standard.  For stepped windows 2, 3, 4 6, or 8 mm is standard.  Other thickness on request.	<b>Select an option:</b> CO : Copper TC : Tinned copper FR : With frame SB : Silver bushbar FM : Flying mesh NO : No contact edge	Specify the width of the contact edge in mm	Specify the mesh wire angle in degrees. Standard is 0 degrees.